

CLAIMS

We claim:

1. A medical device, comprising:

5 a neonatal capsule hermetically closed to prevent contamination of the child by the external environment, said neonatal capsule being connected to an air feeding means for alimentering the newborn child within the capsule with sterile air;

a tempered air closed circuit enclosing said neonatal capsule, the circuit comprising a dome composed of two concentric layers defining an intra-dome space  
10 therebetween, through which tempered air can circulate, the tempered air closed circuit further comprising a thermal base container complementarily connected to the dome, said thermal base container comprising a fan and an electric heater so as to generate tempered air circulation within the intra-dome space to maintain the temperature in an intermediate artificial environment created between the neonatal capsule and the tempered air closed circuit;

15 a continuous ventilation circuit to administer a continuous and regulated air flow of filtered, oxygenated, tempered and humidified air to the newborn child inside the neonatal capsule, said continuous ventilation circuit comprising an air line and an oxygen line, both connected to a gas collector line, the collector line being connected to the neonatal capsule to feed air thereto, the continuous ventilation circuit further comprising a mixture outlet line to  
20 allow gas to exit from said neonatal capsule; and

access means providing access inside said neonatal capsule from the exterior environment.

2. The medical device of claim 1, wherein said access means comprises:

two doors of the dome, each door having a double layer defining a space therebetween through which tempered air can flow, each door comprising two perforated axles in its base portion that serve to join together said door and the dome by insertion into corresponding  
5 holes located in the vertexes of the base of the dome, and also serve the purpose of letting air flow between the two layers; and

four circular doors in the cover of the neonatal capsule.

3. The medical device of claim 1, wherein the neonatal capsule is disposable.

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4. The medical device of claim 1, wherein the thermal base container comprises acoustic filters to reduce noise generated by the air flow therein.

5. The medical device of claim 1, wherein the double layer dome and the  
15 layer of the neonatal capsule are transparent, so as to allow observation of the newborn child within the neonatal capsule, from the exterior of said medical appliance.

6. The medical device of claim 1, wherein the body of the thermal base is externally covered by a layer of thermal insulation material.

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7. The medical device of claim 1, wherein the fan of the thermal base container is of low revolution and comprises wide vanes.

8. The medical device of claim 1, wherein the oxygen line comprises an oxygen receiver, a microbial filter, a check valve, a proportionate flow valve, and a flow sensor, so that oxygen is administrated in electronically controlled quantities to the gas collection line.

5 9. The medical device of claim 1, wherein the air line comprises an air generator for acquiring air from the external environment, a microbial filter, a check valve, a proportionate flow valve, and a flow sensor, so that air is administrated in electronically controlled quantities to the gas collection line.

10 10. The medical device of claim 1, wherein the gas collection line comprises an electronically controlled heater for tempering air mixed from the air and oxygen lines, and an humidifier comprising a recipient filled with distilled water.

15 11. The medical device of claim 1, wherein the mixture outlet line comprises a bacterial filter, as well as flow, temperature, and relative humidity sensors, in order to supervise the condition of the mixture air that is administrated to the newborn.